LAKE: THREEMILE P (VLMP 11)
TOWN: CHINA
COUNTY: KENNEBEC

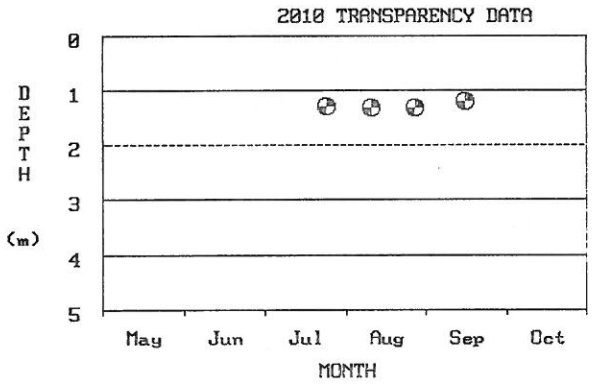
MIDAS: 5416
TRUE BASIN: 1
SAMPLE STATION: 1

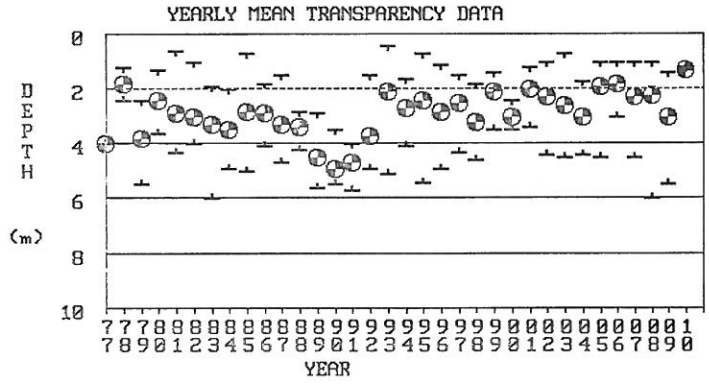
WHOLE LAKE INFORMATION
MAX. DEPTH: 11 m. (37 ft.)
MEAN DEPTH: 5 m. (17 ft.)
DELORME ATLAS #: 13
USGS QUAD: WEEKS MILLS
IFW REGION B: Belgrade Lakes (Augusta)
IFW FISH. MANAGMENT: Warmwater & Coldwater

TRUE BASIN CHARACTERISTICS
SURFACE AREA: 458.0 ha. (1131.7 a.)
FLUSHING RATE: 1.00 flushes/yr.
VOLUME: 22333296.0 cu. m. (18117 ac.-ft.)
DIRECT DRAINAGE AREA: 24.14 sq. km. (9.32 sq. mi.)

PLEASE NOTE THE FOLLOWING: The SAMPLE STATION # refers to the location sampled. The term TRUE BASIN is used to define areas within a lake that are separated by shallow reefs or shoals and therefore function as separate lakes. There are approximately 50 lakes in the state that have more than 1 True Basin. True Basin Characteristics are now being included in the first section of these reports to enable users of the Phosphorous Loading Methodology to better evaluate the data. If there is no data for a particular True Basin, True Basin Characteristics must be obtained from the DEP. THREEMILE P has 1 True Basin(s).

SECCHI DISK TRANSPARENCY GRAPHS:





Note: 2010 graphs may indicate multiple readings taken on a given day.

SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

[* indicates that Secchi disk was visable at bottom of lake (or one reading used in calculation was visable)].

	MEAN COLOR (SPU)	MEAN pH	MEAN ALK (mg/l)	MEAN COND. (uS /cm)	TOTAL PHOS. MEANS (ppb) EPI CORE	SURF GRAB	BOT. GRAB	PRO. GRAB	SECCHI DISK (m.) MIN.	MEAN	MAX.	N	CHLOROPHYLL A(ppb) MIN.	MEAN	MAX.	TROPHIC STATE INDICES EPI PHOS C	G	SEC	CHL
YEAR																			
1977	-	-	-	-	21	-	-	-	4.0	4.0	4.0	1	-	-	-	-	-	-	-
1978	20	7.10	12.0	59	28	-	-	-	1.2	1.8	2.4	2	21.3	30.1	38.3	-	-	-	-
1979	24	6.76	12.8	64	-	-	26	20	2.4	3.8	5.5	7	3.3	6.1	11.7	-	61	63	58
1980	-	-	-	-	-	-	47	28	1.3	2.4	3.6	7	4.4	17.6	46.8	-	70	89	88
1981	-	-	-	-	-	-	89	40	0.6	2.9	4.3	6	3.2	14.7	32.0	-	-	78	-
1982	-	-	-	-	-	-	29	26	1.0	3.0	4.0	6	4.9	4.9	4.9	-	67	76	-
1983	-	-	-	-	-	-	-	41	1.9	3.3	6.0	6	3.9	5.6	7.1	-	81	71	-
1984	24	6.79	11.0	-	-	-	38	39	2.0	3.5	4.9	5	4.3	11.1	16.5	-	-	68	-
1985	-	-	-	-	-	-	-	-	0.7	2.8	5.0	3	-	-	-	-	-	-	-
1986	25	7.50	11.0	50	30	-	51	28	1.8	2.9	4.1	6	2.8	10.5	25.2	-	70	78	74
1987	25	7.15	11.0	60	-	-	54	29	1.5	3.3	4.7	6	3.3	9.5	26.2	-	71	71	71
1988	-	7.18	8.9	-	-	-	25	21	2.8	3.4	4.2	6	4.0	7.0	9.7	-	62	69	62
1989	-	-	-	-	14	-	24	17	2.9	4.5	5.6	6	2.8	4.7	6.8	-	57	54	51
1990	-	-	-	-	18	-	100	27	3.5	4.9	5.5	6	3.2	4.6	6.5	-	69	49	51
1991	25	-	13.0	49	17	-	24	16	4.0	4.7	5.7	6	4.7	6.8	11.5	55	55	52	61

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	MEAN COLOR (SPU)	MEAN pH	MEAN ALK (mg/l)	MEAN COND. (uS	TOTAL PHOS. MEANS (ppb) EPI	SURF	BOT.	PRO.	SECCHI DISK (m.)				CHLOROPHYLL A(ppb)			TROPHIC STATE INDICES EPI PHOS			
YEAR				/cm)	CORE	GRAB	GRAB	GRAB	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	C	G	SEC	CHL
1992	-	7.10	14.0	-	26	-	105	25	1.5	3.7	4.9	6	2.5	8.4	26.9	-	-	65	67
1993	-	-	16.0	-	29	-	48	28	0.4	2.1	5.1	7	4.0	55.5	183.2	71	70	97	123
1994	15	-	-	-	28	-	129	48	1.6	2.7	4.1	4	5.1	16.6	36.5	-	-	-	87
1995	-	-	-	-	28	-	107	71	0.7	2.4	5.4	5	-	-	-	70	97	89	-
1996	-	-	9.0	-	46	-	50	34	1.1	2.8	4.9	4	3.0	22.3	47.6	-	-	-	-
1997	-	-	-	-	28	-	40	37	1.5	2.5	4.3	4	3.2	17.4	32.6	-	-	-	-
1998	15	-	15.0	65	21	-	43	16	1.8	3.2	4.6	5	3.9	5.4	8.3	62	-	73	-
1999	-	-	-	-	38	-	85	28	1.4	2.1	3.5	4	5.5	16.5	22.8	-	-	-	-
2000	17	-	15.0	56	19	-	95	-	2.4	3.0	3.5	4	4.8	7.7	14.0	-	-	-	-
2001	25	7.37	9.8	53	25	-	127	36	1.2	2.0	3.4	4	12.7	23.0	37.8	-	-	-	-
2002	-	-	-	-	26	-	99	28	1.0	2.3	4.4	5	16.2	16.2	16.2	68	70	92	-
2003	32	-	14.0	62	28	-	69	-	0.7	2.6	4.5	5	55.3	58.7	61.0	-	-	85	-
2004	-	-	-	-	25	-	33	28	1.7	3.0	4.4	5	10.2	12.2	14.1	-	-	76	-
2005	45	7.28	13.4	63	21	13	113	-	1.0	1.9	4.5	4	4.9	26.0	48.0	-	-	-	-
2006	-	-	-	-	-	22	-	-	1.0	1.8	3.0	4	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	1.0	2.3	4.5	4	-	-	-	-	-	-	-
2008	-	-	-	-	25	-	121	-	1.0	2.2	6.0	4	20.0	32.4	56.0	-	-	-	-
2009	26	-	15.5	63	25	-	79	-	1.4	3.0	5.5	3	7.5	20.7	36.0	-	-	-	-
2010	-	-	-	-	34	-	103	-	1.2	1.3	1.3	3	43.0	72.9	100.0	-	-	-	-
SUMMARY:	24	7.07	12.6	58	26	18	70	31	0.4	2.9	6.0	34	2.5	18.8	183.2	65	69	74	72

LATE SUMMER TEMPERATURE / DISSOLVED OXYGEN PROFILES:

	SAMPLE DATE															
DEPTH	08/29/05		08/11/08		08/25/08		09/08/08		08/10/09		08/10/10		08/26/10		09/15/10	
m	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm
0.0	22.5	8.1	22.0	9.5	23.0	8.9	22.2	8.5	23.9	8.9	27.4	11.8	22.2	8.7	19.4	7.2
1.0	22.5	7.8	22.0	9.7	22.8	9.1	22.0	8.4	23.8	8.8	25.7	12.9	22.0	8.8	19.4	7.2
2.0	22.5	7.8	21.9	9.2	22.3	8.5	21.8	8.0	22.6	7.7	24.6	11.1	21.3	7.9	19.4	7.1
3.0	22.5	7.7	21.8	8.4	22.1	8.3	21.8	7.8	22.5	7.2	23.9	9.5	21.2	7.6	19.4	7.1
4.0	22.5	7.7	21.7	8.1	21.7	7.3	21.7	7.7	22.2	6.6	23.4	8.1	21.1	7.1	19.4	7.1
5.0	22.5	7.4	21.4	6.9	21.5	6.8	21.6	7.2	21.3	4.6	23.2	6.1	21.0	6.9	19.4	7.1
6.0	18.1	0.8	21.0	5.8	20.9	5.3	21.4	4.8	18.8	0.5	22.5	2.6	21.0	6.9	19.4	7.0
7.0	15.9	0.3	19.8	0.3	20.1	1.4	21.1	3.8	18.0	0.4	19.5	0.5	21.0	7.4	19.4	7.1
8.0	13.2	0.3	18.1	0.2	19.2	0.2	20.8	2.1	17.6	0.3	18.0	0.3	20.8	7.3	19.4	7.0
9.0	12.6	0.3	17.2	0.2	17.9	0.2	20.5	1.0	17.5	0.3	16.7	0.3	18.9	0.3	19.2	6.0
10.0	12.3	0.2	16.9	0.2	17.5	0.2	20.0	0.3	17.1	0.3	16.5	0.2	16.9	0.2	-	-
11.0	12.3	0.2	16.7	0.2	17.1	0.2	19.0	0.2	17.1	0.3	-	-	-	-	-	-
12.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

WATER QUALITY SUMMARY

THREEMILE Pond, China

Midas: 5416, Sample Station #1

The Maine Department of Environmental Protection (Maine DEP) and the Volunteer Lake Monitoring Program (Maine VLMP) have collaborated in the collection of lake data to evaluate present water quality, track nuisance algal blooms, and determine historical water quality trends. This dataset does not include bacteria, mercury, or nutrients other than total phosphorus (TP).

Water quality monitoring datasets for Threemile Pond have been collected since 1977. During this period, 15 years of basic chemical information were collected, along with 30 years of Secchi disk transparency (SDT) measures (1977-2006). In summary, the water quality of Threemile Pond is generally poor, based primarily on measures of SDT, TP, and chlorophyll-a (Chla). The potential for nuisance summertime algal blooms on Threemile Pond is high.

Water Quality Measures: Threemile Pond is a non-colored (average 24 SPU) lake with an average SDT of 3.0 meters (9.8 feet). The range of upper water column TP for Threemile Pond is 14 to 46 parts per billion (ppb) with an average of 26 ppb, while Chla ranges from 2.5 to 183.2 ppb with an average of 16.9 ppb. Recent dissolved oxygen (DO) profiles show significant depletion in 'deep' areas of the lake, particularly during late summer stratification periods. The potential for TP to leave the bottom sediments and become available to algae in the water column (internal recycling) in Threemile Pond is high, based on recent oxygen measurements, while nutrient-rich bottom sediments tend to contribute to the high phosphorus, especially during the warmer summer months.

Comments: The flushing rate is the amount of time required for the lake water to be renewed each year and is a function of the watershed size and volume. The average annual flushing rate for Threemile Pond is 1.0 times, equal to the state lake average. Due to the nuisance summertime algae growth, Threemile Pond is listed by Maine DEP as "water quality limited." More work will be done in the coming years on Threemile Pond to determine the reasons for this and potential for lake restoration.

Nutrient Management: Threemile Pond is on the Maine DEP/EPA 2004 303(d) list of waters non-attaining Maine water quality standards. A Phosphorus Control Action Plan (PCAP) and Total Maximum Daily (Annual Total Phosphorus) Load report was approved by EPA, following Public Review, on 10 September 2003. The Threemile Pond EPA review and approval letter, as well as the full report, can be found on the following Maine DEP web-page: http://www.maine.gov/dep/blwq/docmonitoring/tmdl2.htm.

Further Information: See ME-DEP Explanation of Lake Water Quality Monitoring Report for measured variable explanations. Additional lake information can be found on the Internet at http://www.lakesofmaine.org/ and/or http://www.maine.gov/dep/blwq/lake.htm, or telephone the ME-DEP at 207-287-3901 or the VLMP at 207-783-7733.

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